

DOCUMENT RESUME

ED 169 966

JC 790 264

AUTHOR Odom, John G.
TITLE Validation of Techniques Utilized to Maximize Survey Response Rates.
PUB DATE 9 Apr 79
NOTE 15p.; Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, California, April 8-12, 1979). Not available in hard copy due to marginal reproducibility of the original document.

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Confidentiality; *Letters (Correspondence); *Questionnaires; *Research Design; *Research Methodology; Research Problems; Research Tools; Success Factors; *Surveys

ABSTRACT

Research has identified a number of effective means of maximizing returns to mailed questionnaires. The accompanying cover letter, the first contact with the potential respondents, may be the most important aspect of the survey. Studies indicate that the most effective cover letters incorporate personalization with an altruistic and/or egoistic appeal which might also include an attitude of "contributing to science;" that letterheads are an important contributor to returns as they appear to carry an official sanction of the research; and that a guarantee of confidentiality and/or anonymity is especially important. Though questionnaire length has been the subject of a great deal of study, it may not be as important as other factors such as neatness and attractiveness, placement of difficult sections of the survey, cover design, clear and meaningful language appropriate to the audience, objective questions, and respondent interest. Follow-up surveys have consistently been used to effectively reduce non-response bias; the inclusion of a duplicate copy or short form of the questionnaire has been used successfully as a part of the follow-up procedure. Based upon these findings, three separate surveys--of college freshmen, dental school deans, and behavioral scientists--were designed using the same basic procedures. Response rates for each were in excess of 80%. (AYC)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

ED169966

**VALIDATION OF TECHNIQUES
UTILIZED TO MAXIMIZE
SURVEY RESPONSE RATES**

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

John G. Odom

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC) AND
USERS OF THE ERIC SYSTEM"

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRO-
DUCED EXACTLY AS RECEIVED FROM
THE PERSON OR ORGANIZATION ORIGIN-
ATING IT. POINTS OF VIEW OR OPINIONS
STATED DO NOT NECESSARILY REPRESENT
OFFICIAL NATIONAL INSTITUTE OF
EDUCATION POSITION OR POLICY

John G. Odom, Ph.D
Department of Community Dentistry
MCV Station Box 637
Richmond, Virginia 23298
804-786-0729

BEST COPY AVAILABLE

JC 790 264

Response rates are frequently responsible for the success or failure of a mail survey. Since the researcher cannot use all possible techniques for maximizing questionnaire returns in any single research project, procedures most appropriate to the specific study must be carefully selected. This paper will discuss a number of procedures which have been identified as effective means of maximizing returns and will report the results of this investigator's validation of the desirability of selected techniques as demonstrated with three distinct populations. The selection of specific techniques was based on an extensive review of the literature which focused on procedures for maximizing survey response rates, and the empirical data from these studies was utilized in three separate surveys, each of which yielded returns in excess of 80%.

The first survey, completed in December 1974, focused on a comparison of the psychological and sociological characteristics of early, late, and nonrespondents to a health oriented survey. From a sample of 298 college freshmen, 80.9% responded to a mail survey with 59.4% responding to the initial mailing and 21.5% responding to the follow-up mailing. The questionnaire was ten pages in length and the items yielded demographic data as well as health related information. The second study which used selected techniques to maximize returns was a 1975 survey of all accredited dental schools in the United States, Canada, and Puerto Rico. This survey was designed to identify persons defined as behavioral scientists employed in dental education. The response rate was 69.9% to the initial mailing, and 10.9% to the follow-up mailing. The two page questionnaire resulted in the identification of 121 full or part-time behavioral

scientists employed in dental schools.

The third survey was conducted in Spring 1976. A four page questionnaire was mailed to each behavioral scientist identified through the survey of dental school deans. The questionnaire included items related to faculty rank, salary, number of years in dental education, area of specialization, highest earned degree, and function within the dental school. The initial mailing produced a 60% response rate, and the follow up mailing netted an additional 27% rate of return, resulting in a total response rate of 87%.

The following discussion will identify the specific techniques employed in the previously cited studies and will indicate the basis or justification for their selection. Each of the three surveys included an initial mailing and one follow-up mailing that included a cover letter, questionnaire, a pre-addressed and pre-stamped return envelope.

I. Initial Mailing

A. Cover Letter

The cover letter which accompanies the questionnaire may be the most important aspect of the survey because it is the first contact with potential respondents. Based on a review of the literature it has been noted that several aspects of the cover letter may affect response. Therefore, cover letters have varied in the types of appeals for response, the use of letterheads and sponsoring agencies, appeals for completeness, and promises of anonymity

According to Champion and Sear (1969) one of the less costly response incentives is a cover letter explaining the nature of the study while making an appeal for completion and

and return of the questionnaire. The nature of the appeal employed seems to have a direct bearing on the rate of questionnaire return. Sletto (1940) found that an altruistic appeal (to improve education for young people) yielded the highest return. Champion and Sear's (1969) data supported their hypothesis that "response rates will be greater where the type of cover letter appeal is egoistic rather than altruistic" (p. 338). The difference between egoistic and altruistic cover letters was statistically significant.

Plog (1963) mailed 162 questionnaires to readers of the Boston Herald newspaper who had recently sent letters to the editor of the paper. Combining altruism (letters are important and contribute greatly to the editorial page), personalization through individually typed letters, and an appeal to scientism (collaboration with a group of social scientists) resulted in a rate of return exceeding 90 percent. It should be noted that these factors interact with a subject interest bias which is not separately treated to determine the "cause" of high returns.

Phillips (1951) found personalization of correspondence to be a practical and effective means of maximizing response. "By use of personalizing devices response was increased by approximately 70 percent " (p. 263). Roehrer (1963) also found that personally typed letters yielded higher returns.

Dillman et. al. (1974) and Dillman (1972) stressed the importance of combining procedures which have proved effective in stimulating questionnaire returns. Results from two different surveys (1972) obtained seventy-five percent response rates. An important technique for maximizing returns

rates. An important technique for maximizing returns was the personalization of correspondence.

All letters were typed on letterhead stationary and reproduced by multilith process. Names and street addresses were individually placed on each with matching type, and the project director's signature was individually signed in blue ink (for contrast) with a ball point pen (to leave an impression on the paper as evidence of a "real" signature) (p. 256).

Kephart and Bressler (1958) as well as Levine and Gordon (1958-69) stressed the importance of the questionnaire in their cover letters. Levine and Gordon stated:

To obtain a respondent's involvement and co-operation, it is necessary to impress him with the seriousness and the importance of the project. The letters . . . assured them that their assistance was vital and the results would be of great importance (p. 569).

Thus, it would appear that the most effective cover letters incorporate personalization with an altruistic and/or egoistic appeal which might also incorporate an attitude of "contributing to science." Additionally, one would attempt to stress the nature, seriousness, and importance of the project. Since the cover letter is the initial contact with a prospective respondent, it is crucial that the letter be carefully constructed.

The use of a high quality paper with printed professional letterhead for the cover letter, questionnaire and envelope is a generally accepted procedure. Within academia, it is typical for the university letterhead to be attached. (Bachrack and Scoble, 1967; and Kephart and Bressler, 1958). Since the letterhead appears to carry an official sanction of the research it would appear that this is an important contributor to returns.

In a historical era of rising concern with invasion of privacy, the opportunities for effective use of mail surveys may be reaching an apex. If the researcher is to obtain responses it presently seems that the guarantee of confidentiality is more important than ever. Unless the researcher is able to avoid threatening questions or questions which might subject the respondent to criticism, it is desirable to give the subject an assurance of anonymity. When the requested information is personal and/or controversial, anonymity may encourage "honest response." Bachrack and Scoble (1967) pledged anonymity in both their advance letter and in the cover letter accompanying the questionnaire schedule.

B. Questionnaire

Questionnaire design and length have received a great deal of attention in the literature, particularly specific aspects of format and appearance (Longworth, 1953; Levine and Gordon, 1958-59). Longworth (1953) suggested that neatness and attractiveness be combined with items of high interest, and Sletto (1940) found that difficult questionnaire sections should not be placed near the beginning or in a cluster. Thus in order to maintain interest in the questionnaire and increase responses, Sletto suggested that the researcher "add an interesting first section, since the decision to respond may be made in . . . the first few pages of a questionnaire" (p. 198). In addition, whereas Longworth (1953) found that an interesting and colored questionnaire cover reduced returns, Sletto (1940), in his pretest found that two of ten cover designs were superior to the others. "These results indicate that aesthetic preferences are not highly individualistic and erratic, but rather

that a strong consensus of preferences exists within homogeneous social groups" (p. 199). There would appear to be the question, however, of whether this is also true for heterogeneous groups.

Additional advice in questionnaire construction suggests that the questions be clear and meaningful with language appropriate to the body of potential respondents. Questions should not be worded so as to "direct" an answer, and objective questions which provide a wide range of information and a minimum of annoyance should be used whenever possible (Levine and Gordon, 1958-59). Objectivity is important because subjective open-ended answers are difficult for the respondent to write and for the investigator to evaluate. They do have some advantage in the range of information provided, however (Michael, 1971).

There is also some disagreement over the effect that questionnaire length has upon response. A number of researchers including Goode and Hatt (1952) and Seltiz, Jahoda, Deutsch, and Cook (1963), argued that it is the shorter questionnaire which is returned most frequently. However, Sletto (1940) found that there was no significant difference in the rate of returns with the questionnaires of different sizes (10 pages, 25 pages, and 35 pages). He suggested that "between the limits of 10 and 35 pages, [length] was not likely to affect returns to the final questionnaire by more than five to ten percent" (p. 195). He also suggested that the effect of length may be more important within the limits of one to ten pages. Champion and Sear (1969) offered some insight on this matter as they used three questionnaires of different lengths but all less than ten pages. One was three pages, one six pages, and

one nine pages. Results in both the initial and follow-up mailing indicated that the longer questionnaires were returned most frequently. Dillman (1972), using a 10-page questionnaire, received a seventy-five percent rate of return, and Dillman and Christenson (1974) in a four state sample of the general public obtained response rates ranging from 70 to 75 percent using questionnaires of eight pages or longer.

The above review suggests that the length of the questionnaire may not be as important as originally thought. There may be factors independent of, or in interaction with, length which have the greater effect on the response decision.

C. Return Envelope

The inclusion of a pre-addressed and pre-stamped envelope for returning the completed questionnaire has become a well established procedure. By making the return of the completed schedule as convenient and inexpensive as possible, the researcher enhances the probability that the materials will be returned.

II. Follow-up Mailing

A. Cover Letter

Beginning with the early uses of the questionnaires, Toops (1923-1926) suggested that non-response bias could be reduced through follow-ups. Since that time, follow-up procedures have been quite effective in increasing the returns of questionnaire schedules. Based on a sample of 6,000 veterans residing in Illinois, Indiana, and Wisconsin, Bauer (1957) obtained an unusually high percentage of returns (92%) when surveying veterans' plans for education and training. A 52% return resulted from the original questionnaire. The

first follow-up letter obtained an additional 27 percent, and a second follow-up letter obtained 13 percent additional replies. Thus, two follow-up letters netted a 40 percent increase in questionnaires returned.

Although the purpose of Ford and Zeisel (1949) was to demonstrate that bias in mail surveys cannot be detected after one mailing, once again the follow-up effort was rewarded with an increased rate of questionnaire returns. Sending a questionnaire regarding likes and dislikes in previous employment to a number of employees who had quit their jobs, Ford and Zeisel (1949) received a total of 81 percent returned questionnaires. Follow-up mailings gained 36 percent (17 and 19 percent respectively) in additional returns. Zimmer (1956) in comparing initial respondents, follow-up respondents, and nonrespondents received a 10 percent response to a follow-up letter sent to 220 U.S. Air Force officers and airmen. Using a sample of 600, Suchman and McCandless (1940) received 34 percent of their replies from a second wave mail follow-up.

Continuing through the 1950's and 1960's the follow-up procedure proved effective in advancing rates of questionnaire returns. One of the purposes of Kephart and Bressler's (1958) research was to measure the effectiveness of the follow-up procedure. Waiting four weeks before mailing follow-up letters which reminded nonrespondents of the importance of the questionnaire as well as including a duplicate questionnaire, Kephart and Bressler concluded that the follow-up procedure was quite successful in accounting for an increase of 16 percentage points. After four weeks had elapsed, a second wave of questionnaire and follow-up letters was sent to dilatory

respondents in Levine and Gordon's (1958-59) Blue Cross study. Approximately 90 percent of the questionnaires were returned.

In 1960 Donald reported a study in which questionnaires were mailed to 2,905 members of the League of Women Voters. Three follow-up waves and procedures were used to obtain a 31 percent increase in returns. A follow-up letter added 12.2% returns, a follow-up letter plus a duplicate copy of the questionnaire gained 8.8%, and a personal telephone call netted 10.1% additional responses. Larson and Catton (1962) also increased returns by a three-wave technique which included a card in the first wave, a letter and a duplicate questionnaire in the second, and a follow-up telephone call three weeks after the deadline for returning the schedule. Two weeks after the initial questionnaire was mailed, Mayer and Pratt (1966-67) sent a follow-up letter and second copy of the questionnaire. Approximately one-third of all responses resulted from the second mailing. In a study of 315 farmers, Wells (1966) found that a reminder letter and a second copy of the questionnaire increased the response rate by 36 percent.

B. Duplicate Copy of the Questionnaire

The inclusion of a duplicate copy or a short form of the questionnaire as part of the follow-up procedure has been successfully utilized since the early 1950's. Excluding persons receiving graduate degrees, Phillips (1951) sent questionnaires to 92 persons who were graduates of Fisk University in the classes of 1924 and 1939 and for whom the University Alumni Association had mailing addresses. Two follow-up mailings, the third including personalized correspondence and a duplicate questionnaire, significantly increased

returns. "By the use of follow-ups, response was increased approximately 50 percent" (p. 263).

As previously discussed, Kephart and Bressler (1958) included a duplicate questionnaire as part of a follow-up procedure which increased response by 16 percentage points. Donald's 1960 study of the League of Women Voters netted an 8.8% follow-up response rate when the follow-up contact included a duplicate copy of the questionnaire. In studies by Larson and Catton (1962) as well as by Mayer and Pratt (1966-67) questionnaire returns were increased by the inclusion of a copy of the original questionnaire. Additionally, Wells (1966) obtained 36 percent of all his responses by using the same follow-up procedure.

C. Return Envelopes

A pre-addressed and pre-stamped return envelope, identical to the one included in the initial mailing, was included as part of the follow-up contact.

Summary

This paper has reviewed a number of procedures which have been employed to increase response rates to mail questionnaires. Although researchers have found a number of specific response inducements to be effective, this investigator conducted three highly successful studies that employed a combination of techniques suggested in the literature. Three distinct populations - college freshmen, dental school deans, and behavioral scientists - were surveyed using selected techniques to maximize questionnaire returns. The same basic procedures for questionnaire design, cover letter, content and

mailing were used in each survey, and response rates for each were in excess of 80%. Having validated the combination of techniques used, this researcher is in agreement with Dillman (1972) and Dillman et. al. (1974) who concluded that the combined effect of proven procedures is necessary for the maximization of questionnaire returns.

REFERENCES

- Bachrack, S.D., and Scoble, Harry. "Mail Questionnaire Efficiency: Controlled Reduction of Nonresponse," Public Opinion Quarterly, 1967, 31, 2 (Summer), pp. 265-271.
- Bauer, E. Jackson. "Response Bias in a Mail Survey," Public Opinion Quarterly, 1947, Vol. 11, pp. 594-600.
- Champion, Dean, and Sear, Alan. "Questionnaire Response Rate: A Methodological Analysis," Social Sources, 1969, 47, pp. 335-339.
- Dillman, D.A. "Increasing Mail Questionnaire Response in Large Samples of the General Public," Public Opinion Quarterly, 1972, 36, pp. 254-257.
- Dillman, D.A. Christenson, J.A., Carpenter, E.H., and Brooks, R.M. "Increasing Mail Questionnaire Response: A Four State Comparison." American Sociological Review, 1974, 39, pp. 744-756.
- Donald, Marjorie. "Implications of Nonresponse for the Interpretation of Mail Questionnaire Data," Public Opinion Quarterly, 1960, 24, pp. 99-114.
- Ford, Robert, and Zeisel, Hans. "Bias in Mail Surveys Cannot be Controlled by One Mailing," Public Opinion Quarterly 1949, 13 pp. 495-501.
- Goode, William, and Hatt, Paul. Methods in Social Research. New York: McGraw Hill, 1952, pp. 170-183.
- Kephart, William, Bressler, Marvin. "Increasing the Response to Mail Questionnaires: A Research Study," Public Opinion Quarterly, 1951, 15, pp. 366-367.
- Larson, Richard, and Catton, William. "Can the Mail-back Bias Contribute to a study's validity?" American Sociological Review, 1959, 24, pp. 243-245.
- Levine, Sol, and Gordon, Gerald. "Maximizing Returns on Mail Questionnaires," Public Opinion Quarterly, 1958-59, 22, pp. 568-575.
- Longworth, Donald. "Use of Mail Questionnaires," American Sociological Review, 1953, 18, pp. 310-313.
- Mayer, Charles, and Pratt, Robert. "A Note on Nonresponse in a Mail Survey," Public Opinion Quarterly, 1966-67, 30, pp. 637-646.
- Michael, William and Issac, Steven. Handbook in Research and Evaluation. California: Knapp, 1971

REFERENCES
(con't)

- Phillips, William, Jr. "Weakness of Mail Questionnaires: A Methodological Study," Sociology and Social Research, 1951, 35, pp. 260-267.
- Plog, Stanley. "Explorations for a High Return Rate on a Mail Questionnaire," Public Opinion Quarterly, 1963, 27, pp. 297-298.
- Roehrer, Allan. "Effective Techniques in Increasing Response to Mailed Questionnaires," Public Opinion Quarterly, 1963, 27, pp. 299-302.
- Selfiz, Claire, Jahoda, Marie, Deutsch, Morton, and Cook, Stuart W. Research Methods in Social Relations. New York: Holt, Rinehart and Winston, 1959.
- Sletto, R.F. "Pretesting of Questionnaires," American Sociological Review, 1940, 5, pp. 193-200.
- Suchman, E. and McCandless, B. "Who Answers Questionnaires?" Journal of Applied Psychology, 1940, 24, pp. 758-769.
- Toops, H.A. "Validating the Questionnaire Method," Journal of Personnel Research, 1923, 2, pp. 152-169.
- Toops, H.A. "The Returns from Follow-up Letters to Questionnaires," Journal of Applied Psychology, 1926, 10, pp. 92-101.
- Wells, Donald, and Andapsia, A.O. "On Adoption Proneness and Response to Mail Questionnaires," Rural Sociology, 1966, 31, pp. 483-487.
- Zimmer, Herbert. "Validity of Extrapolating Nonresponse Bias from Mail Questionnaire Follow-ups," Journal of Applied Psychology, 1956, 40, pp. 117-121.

UNIVERSITY OF CALIF.
LOS ANGELES

JUN 8 1979

CLEARINGHOUSE FOR
JUNIOR COLLEGES